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Clinical Sonography & Telecytology
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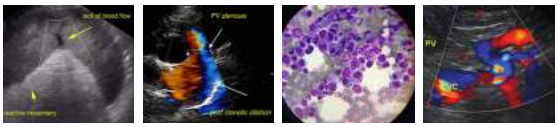


ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT
Nick Dersham

SPECIES
Canine

BREED
Pomeranian Mix

SEX
Male Neutered

AGE
10 years

WEIGHT
8.34 lbs.

INTERPRETED BY
Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

IMAGING PERFORMED BY
Jenna Walsh

HOSPITAL NAME
Cottage Grove VC

REFERRING VET
Dr. Damewood

DATE
10/8/21

INVOICE
11979kk

PRESENTING CLINICAL SIGNS

History: Abdomen distended and difficult to palpate. Lethargic. While doing cystocentesis, had vagal event and collapsed. Current Medications Buprenorphine

Abnormal PE/Chem/CBC/UA Results: SDMA 34, Creat 1.1, BUN 55 Phos 7.9 (Iris Stage 2), TP 4.5, Alb 1.7. UA SG 1.015 pH 7 Prot 4+ Bld 2+.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is distended. A moderate amount of aggregated, echogenic, suspended debris is observed within the lumen. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (0.58 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (4.43 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is hyperechoic and mildly thickened and there is moderate loss of corticomedullary distinction. Trace pyelectasia is present. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (4.49 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is hyperechoic and mildly thickened and there is moderate loss of corticomedullary distinction. Trace pyelectasia is present (0.18 cm in the longitudinal plane). There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is mildly enlarged (0.75 cm at cranial pole) (0.98 cm at caudal pole) (2.91 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

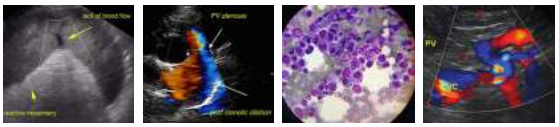
The right adrenal gland is mildly enlarged (0.70 cm at cranial pole) (0.72 cm at caudal pole) (2.04 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (0.69 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. Several, irregular, hyperechoic nodules/areas are observed throughout the organ. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is hyperechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The



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portal vein to caudal vena cava ratio is approximately 1:1. The gall bladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No cholelithsare observed. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The wall of the descending colon is normal to mildly thickened (up to 0.34 cm) with retention of the normal layering pattern. There is no evidence of an obstructive pattern.

Pancreas

The pancreas is diffusely prominent to enlarged with slightly irregular peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat and subtly mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated. Surrounding mesentery is hyperechoic.

Free Abdomen

The mesentery throughout the abdomen is hyperechoic. Trace free fluid is observed. The abdominal lymph nodes are normal/not visible.

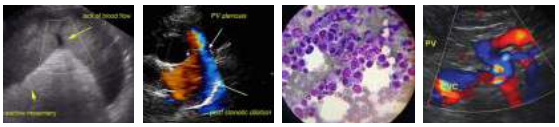
ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Bilateral nephropathy with trace pyelectasia. Given the clinical history, a protein-losing nephropathy is suspected. However, concurrent causes of hypoalbuminemia (i.e., underlying gastrointestinal or hepatic disease) can also not be excluded.
- The pancreatic changes are most consistent with mild to moderate acute or chronic, active pancreatitis.
- Diffuse peritonitis is present, likely secondary to pancreatitis and third spacing of fluids.

Secondary Findings:

- Mild bilateral adrenomegaly.
- The hyperechoic lesions adjacent to the splenic vessels are most consistent with myelolipomas. Although a neoplastic process within the spleen cannot be excluded, it is considered unlikely in this patient.
- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.
- Urinary bladder debris.



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- The colonic wall changes are most consistent with an inflammatory process with a lower possibility of emerging neoplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Regarding the renal disease, the following diagnostics are recommended:
    a. UPC
    b. Urine culture and sensitivity
    c. Baseline blood pressure measurement
    d. +/- testing for infectious diseases (i.e., tick borne, heartworm).
2. If a protein-losing nephropathy is confirmed via an elevated UPC, consider the following protocol"
    a. Considerations for protein-losing nephropathy include:
    b. Angiotensin II receptor blocker (e.g., telmisartan)
    c. Antithrombotic (e.g., clopidogrel at 2.5 mg/kg PO q 24 hours)
    d. Omega-3 fatty acids (65 mg/kg of DHA and EPA combined daily)
    e. Prescription renal diet
    f. Baseline blood pressure measurement with serial monitoring thereafter
    g. Routine monitoring of UPC and bloodwork (CBC, chemistry panel) to assess for progressive disease
3. Three-view thoracic radiographs are recommended to assess cardiopulmonary status.
4. To further evaluate for other causes of hypoalbuminemia, consider the following:
    a. Pre- and post-prandial serum bile acids to assess hepatic function
    b. A fecal evaluation for ova/Giardia
    c. GI panel including serum, cobalamin, TLI and PLI.
    d. +/- endoscopic or surgical gastrointestinal biopsies. (if warranted)
5. Supportive care for pancreatitis is recommended including IV fluid therapy, gastric protectants, antiemetics, pain medication as needed, +/- fresh frozen plasma.

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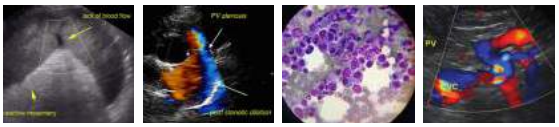

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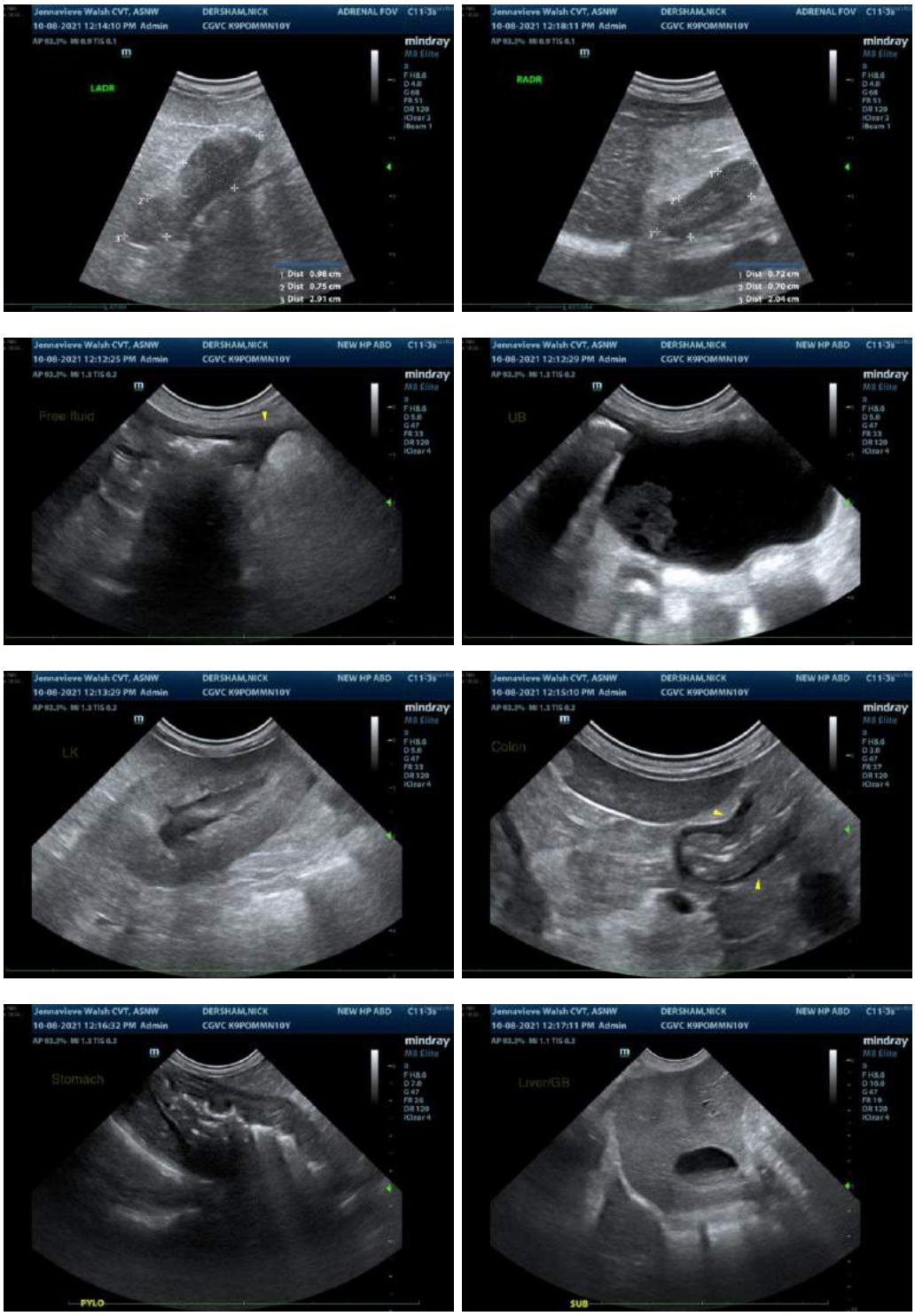

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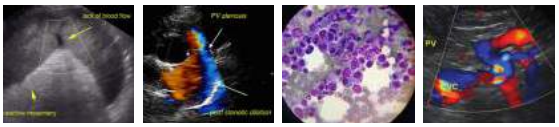

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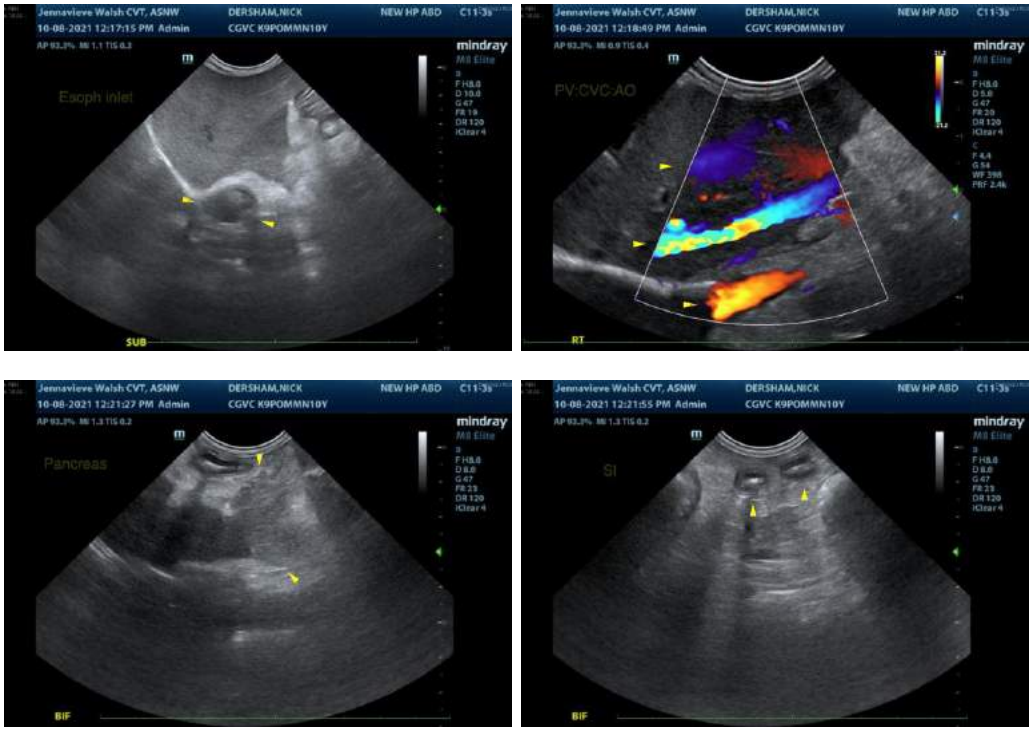

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

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